# TRANSLATION PATENT COOPERATION TREATY POT

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P05-36	FOR FURTHER ACTION	See Form PCT/IPEA/416					
International application No.	International filing date (day/month/year)	Priority date (day/month/year)					
PCT/JP2005/003214	25.02.2005	25.02.2004					
International Patent Classification (IPC) or national	onal classification and IPC						
G02B6/12 (2006.01),	G02B6/13 (2006.01)	, C08F299/00 (2006.01) ,					
	4 (2006.01) , G03F7/0						
Applicant  KANSAI PAINT CO., LTD.							
This report is the international prelir under Article 35 and transmitted to th		is International Preliminary Examining Authority					
This REPORT consists of a total of _	5 sheets, include	ding this cover sheet.					
3. This report is also accompanied by Al	NNEXES, comprising:						
a. (sent to the applicant and	to the International Bureau) a total of	sheets, as follows:					
sheets of the descrip	tion, claims and/or drawings which have bee	n amended and are the basis for this report and/or Rule 70.16 and Section 607 of the Administrative					
Instructions).							
the disclosure in the		considers contain an amendment that goes beyond ted in item 4 of Box No. I and the Supplemental					
	Box.						
b (sent to the International i	Bureau only) a total of (indicate type and num	ber of electronic carrier(s))					
, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see							
Section 802 of the Administ	•	plemental Box Relating to Sequence Listing (see					
4. This report contains indications relation	ng to the following items:						
Box No. I Basis of the	report						
Box No. II Priority							
Box No. III Non-establis	shment of opinion with regard to novelty, invo	entive step and industrial applicability					
Box No. IV Lack of unit	y of invention						
BON 1.0. 1	Box No. V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
Box No. VI Certain doce							
Box No. VII Certain defe	ects in the international application	al application					
Box No. VIII Certain observations on the international application							
Date of submission of the demand	Date of completion of	this report					
Name and mailing address of the IPEA/JP	Authorized officer						
Facsimile No.	Telephone No.						

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International application No.
PCT/JP2005/003214

Box	No. I	Basis of the report					
1.		regard to the language, this report is based o ated under this item.	on the international application in the language in w	hich it was filed, unless otherwise			
		This report is based on translations from the which is the language of a translation furnisl	original language into the following language hed for the purposes of:	,			
		international search (Rule 12.3 and 23.	international search (Rule 12.3 and 23.1(b))				
		publication of the international applica	ation (Rule 12.4)				
		international preliminary examination	(Rule 55.2 and/or 55.3)				
2.	recei		ard to the <b>elements</b> of the international application, this report is based on (replacement sheets which have been furnished to the Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to				
		the international application as originally file	ed/furnished				
	$\boxtimes$	the description:					
		pages _ 1-24		as originally filed/furnished			
			received by this Authority on				
		pages*	received by this Authority on				
	$\bowtie$	the claims:					
	_			as originally filed/furnished			
			as amended (together v	-			
			received by this Authority on				
			received by this Authority on				
	П		received by this redunding on	-			
	Ш	the drawings:					
			received by this Authority on				
	$\Box$		received by this Authority on				
		a sequence listing and/or any related table(s)	) – see Supplemental Box Relating to Sequence List	ting.			
3.	Ш	The amendments have resulted in the cancel	lation of:				
		the description, pages		_			
		the claims, nos.	the claims, nos.				
		the drawings, sheets/figs	the drawings, sheets/figs				
		the sequence listing (specify):					
		any table(s) related to sequence listing	(specify):				
4.			e of) the amendments annexed to this report and li disclosure as filed, as indicated in the Supplementa				
		the description, pages					
		the claims, nos.					
		the drawings, sheets/figs					
		the sequence listing (specify):					
		any table(s) related to sequence listing	(specify):				
*	If ite	m 4 applies, some or all of those sheets may b	oe marked "superseded."				

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Box			ticle 35(2) with regard to novelty, inventive step or industrial applicability; oporting such statement	
1.	Statement			
	Novelty (N)	Claims	1-5	YES
		Claims		NO
	Inventive step (IS)	Claims		YES
		Claims	1-5	NO
	Industrial applicability (IA)	Claims	1-5	YES
		Claims		NO
2.	Citations and explanations (Rule 7	70.7)		

- Document 1: JP 2003-149475 A (Nippon Kayaku Co., Ltd.),
  21 May 2003, paragraphs [0006] to [0026]
  (Family: none)
- Document 2:JP 2003-43684 A (Nippon Kayaku Co., Ltd.), 13

  February 2003, paragraphs [0025] to [0026]

  and [0070] (Family: none)
- Document 3: JP 3-223759 A (Kansai Paint Co., Ltd.), 02
  October 1991, entire text & EP 435262 A2 &
  US 5045434 A & KR 9401555 B & CA 2032630 A
- Document 4: JP 11-288088 A (Kansai Paint Co., Ltd.), 19
  October 1999, entire text & US 6093518 A &
  TW 476020 B

## Claims 1 to 5

The inventions set forth in claims 1 to 5 do not involve an inventive step in the light of documents 1, 3 and 4, which are cited in the international search report, and document 2, which is newly cited.

Document 1 discloses a photocurable resin composition for forming optical waveguides which comprises at least a photoradical polymerization initiator, a solvent and an ethylenically unsaturated group-containing carboxylic acid resin that includes at

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

least one ethylenically unsaturated group and at least one carboxyl group within the molecule; furthermore, document 1 also discloses optical waveguides that employ the composition in question. Notably, document 1 indicates that it is possible to add various epoxy resins to the aforementioned photocurable resin composition for forming optical waveguides, as necessary (refer to paragraphs [0022] and [0023]).

Meanwhile, document 2 presents epoxy compounds as examples of hardening component (H), which is an optional component that can be used in a photosensitive resin composition for forming optical waveguides. Furthermore, the aforementioned hardening component (H) reacts with the residual carboxyl groups that remain upon the resin coating film after the photocuring process when heated, and thus it is preferable to employ the aforementioned hardening component (H) in order to obtain an even stronger hardened coating film (refer to paragraph [0025]). In addition, document 2 specifically presents bisphenol type epoxy resin compounds and novolak type epoxy resin compounds as examples of the epoxy compounds in question (refer to paragraph [0026] and the like).

In the light of the abovementioned technical concept described in document 2, it would have been easy for a person skilled in the art to conceive of configuring so that the epoxy resin that is added to the photocurable resin composition for forming an optical waveguide, as necessary, in the invention disclosed in document 1 is a bisphenol type epoxy resin compound or a novolak type epoxy resin compound.

In addition, claim 1 attempts to specify an object by means of the production method therefor. However,

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although claim 1 and document 1 disclose different methods for the production of carboxyl group-containing unsaturated resins, the carboxyl group-containing unsaturated resin (A) set forth in claim 1 and the ethylenically unsaturated group-containing carboxylic acid resin disclosed in document 1, which are obtained by means of these different methods, are substantially the same, and cannot be differentiated as resins. Furthermore, the method for the production of the carboxyl group-containing unsaturated resin (A) set forth in claim 1 (which corresponds to the ethylenically unsaturated group-containing carboxylic acid resin disclosed in document 1) is also disclosed in documents 3 and 4. With regards to claims 3 and 5, configurations wherein a dry film is formed from a photocurable resin composition for forming optical waveguides are well known.